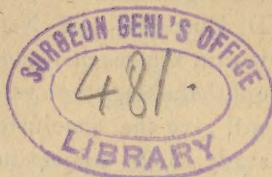


BURNETT (S. M.)

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RECENT VIEWS ON THE PATHOLOGY
OF TRACHOMA.

Written for the Ophthalmic Record by
SWAN M. BURNETT, M. D., Ph. D.,

Professor of Ophthalmology and Otology in Georgetown University,
Ophthalmic and Aural Surgeon to Providence, Garfield and the Children's
Hospitals, and Director of the Eye and Ear Clinic of the Central Dispensary,
WASHINGTON, D. C.

A most important point in the study of trachoma is the determination as to whether or not it is a purely local affection and contagious. Up to within the last ten or fifteen years there was but little doubt in the minds of most clinicians that it was both. Von Arlt considered it as a succedaneum of gonorrhoeal ophthalmia. Recent studies in histology, however, and a broader view of its clinical history would seem to warrant a doubt whether we can consider it either essentially. Of course the first important thing in clearing away the ground is an accurate diagnosis—a clear differentiation between follicular conjunctivitis and genuine trachoma. In the earlier stages of both the diagnosis is by no means easy clinically, there being the same granulated appearance in each and the same subjective symptoms. A thorough and earnest discussion has been carried on for a long time among the microscopists as to the histological condition in the two affections with the final result that it is now accepted, I think, that they are entirely distinct.

The latest resume of all that has been written on the subject is contained in a very able paper in the "Annali di Ottalmologia," Anno 19, Fasc. 5 & 6, 1891, by Dr. G. Moauro, entitled "Contribuzione all' Anatomia Pathologica delle Congiuntivite Folliculare e del Tracoma." The paper contains also the results

of original research carried on in the ophthalmic clinic of Prof. Di Vincentiis, of Naples. As the original is probably not within the reach of most of the readers of the "Record"—Italian ophthalmology not yet having become popularized among us—I will give the conclusion at which he arrives, after a thorough study of the subject in all its bearings.

"1. From an anatomical point of view there are two forms of disease, follicular conjunctivitis and trachoma. The first is characterized by lymphatic follicles, the latter by trachomatous nodules.

"2. The trachomatous nodules are to be classed with granulation tumors.

"3. The trachomatous nodules originate in a proliferation of the fixed cells of the connective tissue and vascular walls.

"4. Towards the end of the first stage of the formation of the nodules there is a participation of the epithelium of the conjunctiva and the adjacent glands manifesting itself by signs of proliferation.

"5. The reparative process in the connective tissue takes place by the transformation of the newly formed epithelial cells.

"6. The giant cells of trachoma are found under two forms; initial and evolutionary, and retrogressive."

He regards the development of the lymph follicles in follicular conjunctivitis as an increase in the quantity of a normal tissue, while trachoma is a new formation entirely.

In the transactions of the Oph. Soc. of the United Kingdom for 1890, v. 10, Dr. J. Ried of Glasgow, publishes some excellent plates showing the changes found in the conjunctiva in the two forms of disease. He thinks it probable that there is lymphoid infiltration in all forms of conjunctival inflammation and it is, of course, also found in the earlier stages of trachoma, but the difference in the histological appearance of the two in the later stages is most pronounced and of the character described by Moauro. These histological views are supported clinically by the distinguishing fact that in papillary conjunctivitis, however long the inflammation may be continued it does not end in a destruction of the conjunctival tissue, while in trachoma it

invariably does. Whenever the trachomatous nodule disappears it destroys the tissue in which it is embedded and its place is taken by cicatricial tissue. So much for the pathological anatomy. There may be a microbe which is characteristic of trachoma and Sattler and Michel claim to have found it—a diplococcus somewhat smaller than the gonococcus—and we have ourselves seen such a coccus in the secretion from a case of genuine trachoma, but its presence has not been established with sufficient constancy to enable us to assert with positiveness that it is the producing cause or is connected etiologically with trachoma in any way. The very fact that the contagiousness of trachoma is disputed is an indication that something more is needed for its development than the presence of its specific germ, if it have one.

The highly contagious nature of trachoma is an idea which had its origin in the time when all forms of granulated lids were classed as trachoma. But in the chronic form, which is the form which true trachoma almost invariably assumes, we have but little evidence of its contagiousness. One member of a family may have it for years and live in the closest intimacy with the others and yet remain the only one affected. Chibret,* says that in seventeen thousand eye patients he has seen two cases of trachoma in the same family, a mother and daughter, at the same time, but once. If it were a purely local and contagious disease this could not be. In fact the more we study into the histological anatomy and the more closely we draw the lines of differential diagnosis between papillary conjunctivitis and trachoma the more we become impressed that trachoma is the manifestation of a dyscrasia and that for its development there must be a predisposing as well as an exciting cause.

Of late years attention has been directed to that feature in several quarters and in several different ways. It has been discovered, for instance, that an elevation of one thousand feet above the sea level gives an almost complete immunity from the disease. This immunity, however, is not complete, for I have myself seen the disease at from twelve to fifteen hundred feet,

* Ann. d'Oculistique, Jan—Feb. 1891.

and Prof. Kober has assured me that he has seen it among the Indians of California at 4700 feet. The question was very thoroughly discussed at the last International congress in Berlin, and in a paper I read on that occasion † I again called attention to the fact first brought to prominence in a paper which I read before the International Ophthalmological Congress in New York in 1876, that the negro in this country seems to be almost entirely free from the disease. We, of course, hear of negroes who are said to have trachoma, but then there is always the question as to whether the observer has made a clear distinction between that affection and follicular conjunctivitis. In the majority of cases I do not believe such a distinction can be made by simple inspection until the cicatricial stage of trachoma has set in. I have myself seen cases in the negro where the clinical aspects were such as we have in genuine trachoma but I have not yet seen, in a clinical service composed largely of negroes, during the last fifteen years, a single case of entropion due to cicatricial contraction of the conjunctiva of the lid. Yet these negroes lived for the most part in crowded quarters and among the most unhygienic surroundings. They are greatly predisposed to scrofula and tubercles and are as subject to purulent and mucopurulent conjunctivitis as the whites. Dr. Chibret of France, in a paper read at the Berlin Congress and published in the *Ann. d'Oculistique*, Jan.-Feb. 1881, also called attention to racial influence in the causation of trachoma, and instanced the celtic race in Europe as an example of immunity. He tries to account, in some measure at least, for the freedom from the disease given by the higher elevations, by the fact that these high places were originally settled by the Celts. That may be the case with the Celts in Europe but it certainly cannot be said of the Celts in Great Britain, for it is well known that the Irish suffer more from the disease than any other people, probably, except the Belgians. And yet it is not impossible that the Celt after he got to the British Isles developed a predisposition to the deposit of the trachoma nodule, and it may be too, that, in time, the negro in America may cultivate a susceptibility to trachoma just as he is now very rapidly developing myopia.

† Afterwards republished in the *Medical News*, Nov. 22, 1890.

Dr. Chibret quotes Dr. Sulze as saying that during an ophthalmic practice of seven years in Java, amongst Negroes, Chinese, and Javanese he found the negroes to enjoy a much greater immunity from trachoma than the other races. It yet remains true in this country at least that your surest way of avoiding trachoma is to be a negro.

The points then, in favor of an essential dyscrasia underlying trachoma are: first, the fact that certain races have an immunity from the disease; second, that its development is impeded at altitudes greater than one thousand feet; third, that it is not purely contagious like, for instance, ordinary blennorrhoea of the conjunctiva. In regard to this latter proposition it should be said that undoubtedly an attack of conjunctival inflammation of any kind would be likely to develop the trachoma nodule in any one predisposed to it and that, on the other hand, a discharge from the conjunctiva of a trachomatous eye may excite an inflammation that is not trachomatous in another eye. The lack of a clear sifting out of facts and possibilities has thus laid in the way of a proper appreciation of the true relation of trachoma to contagiousness. What the exact nature of this dyscrasia is we do not yet know but it is a fair assumption that enfeebled vital powers play an important part in its development.

The therapeutics of trachoma have never been attentively studied from this point of view of its pathology, but the time has now come when, in the treatment of this serious disease, we must think of something beside the local application of caustics and astringents. Residence at a high altitude should certainly be enforced when possible, and attention given to improvement in general nutrition.

